

APPENDIX

Re: U.S. Patent Application No. 10/517,991
Inventor: Jean-Luc LEVAVASSEUR
Assignee: AIRCELLE
Our Ref.: 122077
Your Ref.: BR048926/FGA/SGI

1. (Currently Amended) A method for making an acoustic panel ~~with having~~ at least a double resonator, ~~this the~~ panel comprising, in ~~the a~~ thickness direction, ~~in the following order~~ at least the following layers: a first layer that is a multiperforated acoustic skin, a second layer that is a primary honeycomb layer, a ~~likewise~~ third layer that is a multiperforated septum layer, a fourth layer that is a secondary honeycomb layer and a fifth layer that is a solid skin, the method comprising:

stacking (1) the first and second layers or (2) the fifth and fourth layers on a mold,

covering (1) the first and second layers or (2) the fifth and fourth layers with the third layer that comprises a plurality of component parts that approximate a final shape of the third layer,

→ stacking (1) the fourth and fifth layers or (2) the second and first layers on the third layer, such that the third layer is sandwiched between the second and fourth layers,
~~the septum being made into a sandwich between the two honeycombs,~~

~~the panel being assembled by stacking and adhesive bonding the aforementioned constituents, on a mold in the shape of the panel to be obtained,~~

applying a force a transverse pressure being exerted on the constituents first
though fifth layers during bonding so as to press them against each other other, as well as against the mold, and

adhesive bonding the first through fifth layers to each adjacent layer,

~~the final shape of the septum in the assembled panel, being referenced,~~
~~wherein the septum is obtained during the assembly of the panel by positioning a~~
~~plurality of component parts edge-to-edge against one of the honeycombs and by covering the~~
~~component parts positioned in this way by the other honeycomb, wherein (1) the component~~
~~parts of the third layer are being cut from a flexible strip, strip of material to facilitate an~~
~~arrangement of the component parts that approximates the final shape of the third layer, the~~
~~component parts being defined so as to enable, with suitable flexing, an approximation of the~~
~~final shape, by developable curved surfaces substantially joined together, to be obtained, the~~
~~maximum error being noted as E, the transverse pressure then bringing about the deformation of~~
~~(2) the applied force deforms the component parts parts, so as to bring them forcing the~~
~~component parts to into the final shape, shape of the third layer, and (3) E having a sufficiently~~
~~low value to prevent the component parts from creasing and tearing during this deformation,~~
~~wherein the a measurement of a maximum deviation E maximum error E is a~~
~~maximal distance between a point on a developable surface of any of the plurality of component~~
~~parts the developable surface and the point on the developable surface when then third layer is in~~
~~its the final shape of the septum and the maximum error E is between 2 mm and is less than or~~
~~equal to 2.5 mm.~~